

Date: Fri, 18 Feb 94 04:31:02 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@UCSD.Edu
Reply-To: Ham-Space@UCSD.Edu
Precedence: Bulk
Subject: Ham-Space Digest V94 #33
To: Ham-Space

Ham-Space Digest Fri, 18 Feb 94 Volume 94 : Issue 33

Today's Topics:

 Daily IPS Report - 11 Feb 94 (2 msgs)
 Daily IPS Report - 18 Feb 94
 Guide to the Personal Radio Newsgroups
 It's Official: GPS Anti-spoofing Is Now on Continuously
 MIR frequencies, AM or FM ?
 Oscar 13 Questions
 Weekly IPS Report - 18 Feb 94

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Thu, 17 Feb 1994 14:58:56 GMT
From: agate!howland.reston.ans.net!pipex!uknet!strath-cs!cen.ex.ac.uk!
jmvasnie@network.ucsd.edu
Subject: Daily IPS Report - 11 Feb 94
To: ham-space@ucsd.edu

dave@eram.esi.com.au writes:

> IPS RADIO AND SPACE SERVICES AUSTRALIA
> Daily Solar And Geophysical Report
> Issued at 2330 UT 10 February 1994
> Summary for 10 February and Forecast up to 13 February
> IPS Warning 03 was issued on 03 Feb and expires today.
> -----
>
> 1A. SOLAR SUMMARY
> Activity: low

>
> Flares: none.
>
> Observed 10.7 cm flux/Equivalent Sunspot Number : 094/040
>
> 1B. SOLAR FORECAST
> 11 February 12 February 13 February
> Activity Low Low to moderate Low to moderate
> Fadeouts None expected None expected None expected
>
> Forecast 10.7 cm flux/Equivalent Sunspot Number : 090/034
>
> 1C. SOLAR COMMENT
> Previously flaring region (M class) has yet to appear.
> -----
>
> 2A. MAGNETIC SUMMARY
> Geomagnetic field at Learmonth : ???
>
> Estimated Indices : A K Observed A Index 9 February
> Learmonth 21 3333 5442
> Fredericksburg 27 32
> Planetary 30 34
>
>
> 2B. MAGNETIC FORECAST
> DATE Ap CONDITIONS
> 11 Feb 20 Active.
> 12 Feb 20 Active.
> 13 Feb 20 Active.
>
> 2C. MAGNETIC COMMENT
> Magnetic activity did not decline as expected, further active periods
> are now expected. Another recurrent disturbance is expected Feb
> 14-15.
>
> 3A. GLOBAL HF PROPAGATION SUMMARY
> LATITUDE BAND
> DATE LOW MIDDLE HIGH
> 10 Feb fair-normal fair-normal poor-fair
> PCA Event : None.
> 3B. GLOBAL HF PROPAGATION FORECAST
> LATITUDE BAND
> DATE LOW MIDDLE HIGH
> 11 Feb normal fair poor
> 12 Feb normal fair poor
> 13 Feb normal fair poor
> 3C. GLOBAL HF PROPAGATION COMMENT

```

> Propagation conditions are now expected to remain fair for
> mid lats and fair-poor at high lats until Feb 16.
>
> -----
>
> 4A. AUSTRALIAN REGION IONOSPHERIC SUMMARY
> MUFs at Sydney were about 15% below predicted monthly values
>
> T index:  -4
>
> 4B. AUSTRALIAN REGION IONOSPHERIC FORECAST
> DATE    T-index  MUFs
> 11 Feb    10    10 to 15% below predicted monthly values.
> 12 Feb    20    About 10% below predicted monthly values.
> 13 Feb    20    About 10% below predicted monthly values.
>
> Predicted Monthly T Index for February is 30.
>
> 4C. AUSTRALIAN REGION COMMENT
> Ionosphere did not recover as expected yesterday, probably due
> to continuing magnetic activity.  Another disturbed period is
> expected Feb 14-16.
> --
> Dave Horsfall (VK2KFU)      VK2KFU @ VK20P.NSW.AUS.OC      PGP 2.3
> dave@esi.COM.AU            ...munhari!esi.COM.AU!dave      available

```

```

-----

Date: 18 Feb 94 02:09:56 GMT
From: munhari.oz.au!newshost.anu.edu.au!sserve!usage!metro!news.ci.com.au!eram!
dave@network.ucsd.edu
Subject: Daily IPS Report - 11 Feb 94
To: ham-space@ucsd.edu

```

In article <CLDIy8.7HG@cen.ex.ac.uk>,
 jmvasnie@cen.ex.ac.uk writes:

```

| dave@eram.esi.com.au writes:
| > IPS RADIO AND SPACE SERVICES AUSTRALIA
| > Daily Solar And Geophysical Report
| > Issued at 2330 UT 10 February 1994
| > Summary for 10 February and Forecast up to 13 February

```

[Entire report deleted]

Yes, I did write that...

--

Dave Horsfall (VK2KFU) VK2KFU @ VK20P.NSW.AUS.OC PGP 2.3
dave@esi.COM.AU ...muninari!esi.COM.AU!dave available

Date: 18 Feb 94 01:01:18 GMT
From: muninari.oz.au!newshost.anu.edu.au!sserve!usage!metro!news.ci.com.au!eram!
dave@network.ucsd.edu
Subject: Daily IPS Report - 18 Feb 94
To: ham-space@ucsd.edu

IPS RADIO AND SPACE SERVICES AUSTRALIA
Daily Solar And Geophysical Report
Issued at 2330 UT 17 February 1994
Summary for 17 February and Forecast up to 20 February
IPS Warning 06 was issued on 17 Feb and is current for
20-23 Feb.

1A. SOLAR SUMMARY

Activity: low

Flares: none.

Observed 10.7 cm flux/Equivalent Sunspot Number : 106/055

1B. SOLAR FORECAST

	18 February	19 February	20 February
Activity	Low	Low	Low
Fadeouts	None expected	None expected	None expected

Forecast 10.7 cm flux/Equivalent Sunspot Number : 110/060

1C. SOLAR COMMENT

None.

2A. MAGNETIC SUMMARY

Geomagnetic field at Learmonth : quiet to unsettled

Estimated Indices :	A	K	Observed A Index 16 February
Learmonth	10	2222 3332	
Fredericksburg	12		16
Planetary	10		15

2B. MAGNETIC FORECAST

DATE	Ap	CONDITIONS
------	----	------------

18 Feb 10 Quiet to unsettled.
19 Feb 12 Quiet to unsettled.
20 Feb 18 Unsettled to active.

2C. MAGNETIC COMMENT

None.

3A. GLOBAL HF PROPAGATION SUMMARY

LATITUDE BAND

DATE	LOW	MIDDLE	HIGH
17 Feb	normal	normal	fair-normal

PCA Event : None.

3B. GLOBAL HF PROPAGATION FORECAST

LATITUDE BAND

DATE	LOW	MIDDLE	HIGH
18 Feb	normal	normal	fair
19 Feb	normal	normal	fair
20 Feb	normal	fair	poor

3C. GLOBAL HF PROPAGATION COMMENT

NONE.

4A. AUSTRALIAN REGION IONOSPHERIC SUMMARY

MUFs at Sydney were 10 to 15% above predicted monthly values

T index: 54

4B. AUSTRALIAN REGION IONOSPHERIC FORECAST

DATE	T-index	MUFs
18 Feb	55	About 15% above predicted monthly values.
19 Feb	50	About 10% above predicted monthly values.
20 Feb	20	About 15% below predicted monthly values.

Predicted Monthly T Index for February is 30.

4C. AUSTRALIAN REGION COMMENT

None.

--

Dave Horsfall (VK2KFU)	VK2KFU @ VK20P.NSW.AUS.OC	PGP 2.3
dave@esi.COM.AU	...muninari!esi.COM.AU!dave	available

Date: Tue, 15 Feb 1994 12:00:25 GMT
From: news.mtholyoke.edu!news.unomaha.edu!news@uunet.uu.net
Subject: Guide to the Personal Radio Newsgroups
To: ham-space@ucsd.edu

Posted-By: auto-faq 3.2.1.2

Archive-name: radio/personal-intro

Revision: 1.5 12/18/93 14:15:53

Changes: new mailing lists, .packet rmgroup, and .policy updates

(Note: The following is reprinted with the permission of the author.)

This message describes the rec.radio.amateur.*, rec.radio.cb, rec.radio.info, and rec.radio.swap newsgroups. It is intended to serve as a guide for the new reader on what to find where. Questions and comments may be directed to the author, Jay Maynard, K5ZC, by Internet electronic mail at jmaynard@oac.hsc.uth.tmc.edu. This message was last changed on 18 September 1993 to add the mailing lists for the new rec.radio.amateur newsgroups, to note the rmgroup of rec.radio.amateur.packet, and to officially retire some (in)famous threads of discussion on rec.radio.amateur.policy.

History

=====

Way back when, before there was a Usenet, the Internet hosted a mailing list for hams, called (appropriately enough) INFO-HAMS. Ham radio discussions were held on the mailing list, and sent to the mailboxes of those who had signed up for it. When the Usenet software was created, and net news as we now know it was developed, a newsgroup was created for hams: net.ham-radio. The mailing list and the newsgroup were gatewayed together, eventually.

As the net grew, and as packet radio came into vogue, packet discussion began to dominate other topics in the group and on the list. This resulted in the logical solution: a group was created to hold the packet discussion, and another corresponding mailing list was created as well: net.ham-radio.packet and PACKET-RADIO, respectively.

These two groups served for several years, and went through Usenet's Great Renaming essentially unchanged, moving from net.ham-radio[.packet] to rec.ham-radio[.packet]. Readership and volume grew with the rest of the network.

The INFO-HAMS mailing list was originally run from a US Army computer at White Sands Missile Range, SIMTEL20. There were few problems with this arrangement, but one was that the system was not supposed to be used for commercial purposes. Since one of hams' favorite pastimes is swapping gear, it was natural for hams to post messages about equipment for sale to INFO-HAMS/rec.ham-radio. This ran afoul of SIMTEL20's no-commercial-use restriction, and after some argument, a group was created specifically for messages like that: rec.ham-radio.swap. This group wasn't gatewayed to a mailing list, thus avoiding problems.

While all this was happening, other folks wanted to discuss other aspects of the world of radio than the personal communications services. Those folks created the rec.radio.shortwave and rec.radio.noncomm newsgroups, and established the precedent of the rec.radio.* hierarchy, which in turn reflected Usenet's overall trend toward a hierarchical name structure.

The debate between proponents of a no-code ham radio license and its opponents grew fierce and voluminous in late 1989 and 1990. Eventually, both sides grew weary of the debate, and those who had not been involved even more so. A proposal for a newsgroup dedicated to licensing issues failed. A later proposal was made for a group that would cover the many recurring legal issues discussions. During discussion of the latter proposal, it became clear that it would be desirable to fit the ham radio groups under the rec.radio.* hierarchy. A full-blown reorganization was passed by Usenet voters in January 1991, leading to the overall structure we now use.

After the reorganization, more and more regular information postings began to appear, and were spread out across the various groups in rec.radio.*. Taking the successful example of the news.answers group, where informational postings from across the net are sent, the group rec.radio.info was created in December, 1992, with Mark Salyzyn, VE6MGS, initially serving as moderator.

In January, 1993, many users started complaining about the volume in rec.radio.amateur.misc. This led to a discussion about a second reorganization, which sparked the creation of a mailing list by Ian Kluff, KD6EUI. This list, which was eventually joined by many of the most prolific posters to the ham radio groups, came up with a proposal to add 11 groups to the rec.radio.amateur hierarchy in April 1993. The subsequent vote, held in May and early June, approved the creation of five groups: rec.radio.amateur.digital.misc (to replace .packet), .equipment, .homebrew, .antenna, and .space.

The Current Groups =====

I can hear you asking, "OK, so this is all neat history, but what does it have to do with me now?" The answer is that the history of each group has a direct bearing on what the group is used for, and what's considered appropriate where.

The easy one is rec.radio.amateur.misc. It is what rec.ham-radio was renamed to during the reorganization. Any message that's not more appropriate in one of the other groups belongs here, from contesting to DX to ragchewing on VHF to information on becoming a ham.

The group rec.radio.amateur.digital.misc is for discussions related to (surprise!) digital amateur radio. This doesn't have to be the common two-meter AX.25 variety of packet radio, either; some of the most

knowledgeable folks in radio digital communications can be found here, and anything in the general area is welcome. The name was changed to emphasize this, and to encourage discussion not only of other text-based digital modes, such as AMTOR, RTTY, and Clover, but things like digital voice and video as well. The former group, `rec.radio.amateur.packet`, should be removed by September 21st, 1993. It is obsolete, and you should use `.digital.misc` instead (or the appropriate new mailing list, mentioned below). The group has `.misc` as part of the name to allow further specialization if the users wish it, such as `.digital.tcp-ip`.

The swap group is now `rec.radio.swap`. This recognizes a fact that became evident shortly after the original group was formed: Hams don't just swap ham radio gear, and other folks besides hams swap ham equipment. If you have radio equipment, or test gear, or computer stuff that hams would be interested in, here's the place. Equipment wanted postings belong here too. Discussions about the equipment generally don't; if you wish to discuss a particular posting with the buyer, email is a much better way to do it, and the other groups, especially `.equipment` and `.homebrew`, are the place for public discussions. There is now a regular posting with information on how to go about buying and selling items in `rec.radio.swap`; please refer to it before you post there.

The first reorganization added two groups to the list, one of which is `rec.radio.amateur.policy`. This group was created as a place for all the discussions that seem to drag on interminably about the many rules, regulations, legalities, and policies that surround amateur radio, both existing and proposed. Recent changes to the Amateur Radio Rules (FCC Part 97) have finally laid to rest the Great Usenet Pizza Autopatch Debate as well as complaints about now-preempted local scanner laws hostile to amateurs, but plenty of discussion about what a bunch of rotten no-goodniks the local frequency coordinating body is, as well as the neverending no-code debate, may still be found here.

The other added group is `rec.radio.cb`. This is the place for all discussion about the Citizens' Band radio service. Such discussions have been very inflammatory in `rec.ham-radio` in the past; please do not cross-post to both `rec.radio.cb` and `rec.radio.amateur.*` unless the topic is genuinely of interest to both hams and CBers - and very few topics are.

The `rec.radio.info` group is just what its name implies: it's the place where informational messages from across `rec.radio.*` may be found, regardless of where else they're posted. As of this writing, information posted to the group includes Cary Oler's daily solar propagation bulletins, ARRL bulletins, the Frequently Asked Questions files for the various groups, and radio modification instructions. This group is moderated, so you cannot post to it directly; if you try, even if your message is crossposted to one of the other groups, your message will be mailed to the moderator, who is currently Mark Salyzyn, VE6MGS. The email address for submissions to the group is `rec-radio-info@ve6mgs.ampr.ab.ca`. Inquires and other administivia should be

directed to `rec-radio-request@ve6mgs.ampr.ab.ca`. For more information about `rec.radio.info`, consult the introduction and posting guidelines that are regularly posted to that newsgroup.

The groups `rec.radio.amateur.antenna`, `.equipment`, `.homebrew`, and `.space` are for more specialized areas of ham radio: discussions about antennas, commercially-made equipment, homebrewing, and amateur radio space operations. The `.equipment` group is not the place for buying or selling equipment; that's what `rec.radio.swap` is for. Similarly, the `.space` group is specifically about amateur radio in space, such as the OSCAR program and SAREX, the Shuttle Amateur Radio EXperiment; other groups cover other aspects of satellites and space. Homebrewing isn't about making your own alcoholic beverages at home (that's `rec.crafts.brewing`), but rather construction of radio and electronic equipment by the amateur experimenter.

Except for `rec.radio.swap` and `rec.radio.cb`, all of these newsgroups are available by Internet electronic mail in digest format; send a mail message containing "help" on a line by itself to `listserv@ucsd.edu` for instructions on how to use the mail server.

All of the groups can be posted to by electronic mail, though, by using a gateway at the University of Texas at Austin. To post a message this way, change the name of the group you wish to post to by replacing all of the `'.'`'s with `'-'`'s - for example, `rec.radio.swap` becomes `rec-radio-swap` - and send to that `name@cs.utexas.edu` (`rec-radio-swap@cs.utexas.edu`, for example). You may crosspost by including multiple addresses as `Cc:` entries (but see below). This gateway's continued availability is at the pleasure of the admins at UT-Austin, and is subject to going away at any time - and especially if forgeries and other net.abuses become a problem. You have been warned.

A Few Words on Crossposting

=====

Please do not crosspost messages to two or more groups unless there is genuine interest in both groups in the topic being discussed, and when you do, please include a header line of the form `"Followup-To: group.name"` in your article's headers (before the first blank line). This will cause followups to your article to go to the group listed in the `Followup-To:` line. If you wish to have replies to go to you by email, rather than be posted, use the word `"poster"` instead of the name of a group. Such a line appears in the headers of this article.

One of the few examples of productive cross-posting is with the `rec.radio.info` newsgroup. To provide a filtered presentation of information articles, while still maintaining visibility in their home newsgroups, the moderator strongly encourages cross-posting. All information articles should be submitted to the `rec.radio.info` moderator so that he may simultaneously cross-post your information to the appropriate newsgroups. Most newsreaders will only present

the article once, and network bandwidth is conserved since only one article is propagated. If you make regular informational postings, and have made arrangements with the moderator to post directly to the group, please cross-post as appropriate.

--

Jay Maynard, EMT-P, K5ZC, PP-ASEL | Never ascribe to malice that which can
jmaynard@oac.hsc.uth.tmc.edu | adequately be explained by stupidity.

"If my car ran OS/2, it'd be there by now" -- bumper sticker

GCS d++ p+ c++ l+ m+/- s/++ g++ w++ t+ r

--

73, Paul W. Schleck, KD3FU

pschleck@unomaha.edu

Date: 17 Feb 1994 02:11:28 GMT

From: agate!overload.lbl.gov!ux5.lbl.gov!dprsm@ames.arpa

Subject: It's Official: GPS Anti-spoofing Is Now on Continuously

To: ham-space@ucsd.edu

What is anti-spoofing? Does this mean that we are now getting a scrambled signal? (which I think we've been getting all along?); or does it mean that the powers-that-be have come to their senses and turned off the signal jitter?

Date: 17 Feb 1994 14:05:57 GMT

From: library.ucla.edu!agate!howland.reston.ans.net!cs.utexas.edu!math.ohio-state.edu!jussieu.fr!univ-lyon1.fr!elendir@network.ucsd.edu

Subject: MIR frequencies, AM or FM ?

To: ham-space@ucsd.edu

Hello,

I've heard that the MIR station used the 143.625 MHz for Earth control. Do you know which mode they use ? AM, FM or SSB ?

Thanks for any info,

Vince (11 weeks and waiting ...)

--

Date: 17 Feb 94 16:25:35 GMT

From: news-mail-gateway@ucsd.edu
Subject: Oscar 13 Questions
To: ham-space@ucsd.edu

The cheapest way to go is a 8-12 turn helix for 432 uplink and the Quagi for downlink.

The following chart is a design by W3PM for the 2m downlink for A0-13.

Frequency	145.900	# of Elements	8	Units are Cm
	Length	Spacing	Boom Pos	
Reflector	218.122	0.000	0.000	
Driven Ele	205.740	52.705	52.705	
Director # 1	90.487	39.529	92.234	
Director # 2	90.011	83.185	175.419	
Director # 3	89.535	43.974	219.393	
Director # 4	89.059	65.722	285.115	
Director # 5	88.582	65.722	350.837	
Director # 6	88.106	65.722	416.560	
Total Length	4.166 M			

I recently acquired a 6 element quad for 2m (~ 6 feet long) and a quick check the other nite seemed to show some good promise. I need to do a better comparison between it and my KLM-14C for high squint angles, weak signals etc.

The S band downlink on A0-13 is approximately 2400 Mhz. Again you can build a small dish (2-4 ft) or a 16-22 turn helix. The helix is probably a better choice rather than the 2 ft dish. The main cost for S band is the preamp and downconverter. Down East microwaves sells kits/finished products in the range of \$90/\$200. SSB electronics has finished products in the \$200-\$400 range. The high priced SSB stuff has very low noise temperatures and would suit the small dish or short helix. W3PM has the Down East kits on a 20 turn helix and the signals are pretty good. (By the way W3PM is available at w3pm@amsat.org and is the ham I bother with all my questions :))

end

the views expressed here are the author's

C. Harper harper@huntsville.sparta.com or kd4qio@amsat.org

KD4QIO

SPARTA Inc (205) 837-5282 x1216 voicemail

4901 Corporate Drive (205) 830-0287 FAX

Huntsville AL 35805

"we have met the enemy and he is us." w. kelly

Date: 18 Feb 94 01:02:03 GMT
From: munnari.oz.au!newshost.anu.edu.au!sserve!usage!metro!news.ci.com.au!eram!
dave@network.ucsd.edu
Subject: Weekly IPS Report - 18 Feb 94
To: ham-space@ucsd.edu

11 FEBRUARY - 17 FEBRUARY 1994

Issue No 07
Date of issue: 18 February, 1994

INDICES:

Date	11	12	13	14	15	16	17
10cm	093	098	098	101	104	105	106
A	38	27	30	28	26	16 (12)
T	20	26	36	48	72	41	54

SUMMARY OF ACTIVITY

February 11

Solar activity was very low.

The geomagnetic field at Learmonth (WA) was unsettled 00-09 and 21-24UT, and at storm levels at other times.

Ionospheric F2 critical frequencies at Sydney were near predicted monthly values, with Sporadic E blanketing at 08UT.

February 12

Solar activity was very low.

The geomagnetic field at Learmonth (WA) was unsettled to active, apart from minor storm levels 12-15UT.

Ionospheric F2 critical frequencies at Sydney were near predicted monthly values

February 13

Solar activity was low.

The geomagnetic field at Learmonth (WA) was unsettled to active, apart from minor storm levels 18-21UT.

Ionospheric F2 critical frequencies at Sydney were near predicted monthly values until 16UT, apart from enhancements of 15-40% from 11-15UT, and 15-30% depressed from 17UT onwards.

February 14

Solar activity was very low.

The geomagnetic field at Learmonth (WA) was unsettled to active, apart from minor storm levels 15-18UT.

Ionospheric F2 critical frequencies at Sydney were near predicted

monthly values until 09UT, and enhanced by 15-30% thereafter.

.SK

February 15

Solar activity was very low.

The geomagnetic field at Learmonth (WA) was unsettled to active, apart from minor storm levels 12-15UT.

Ionospheric F2 critical frequencies at Sydney were 30-60% enhanced until 06UT, 15-30% enhanced 07-18UT, and near predicted monthly values thereafter.

February 16

Solar activity was very low.

The geomagnetic field at Learmonth (WA) was unsettled to active

Ionospheric F2 critical frequencies at Sydney were near predicted monthly values with spread F during local night.

February 17

Solar activity was low.

The geomagnetic field at Learmonth (WA) was quiet to unsettled

Ionospheric F2 critical frequencies at Sydney were 10 to 15% above predicted monthly values

FORECAST FOR THE NEXT WEEK (18 - 24 FEBRUARY)

SOLAR: low

GEOMAGNETIC: active 20-23 Feb due to a coronal hole

IONOSPHERIC: near predicted monthly values, MUFs are then expected to be depressed 15-20% during the coronal hole activity

--

Dave Horsfall (VK2KFU)	VK2KFU @ VK20P.NSW.AUS.OC	PGP 2.3
dave@esi.COM.AU	...munari!esi.COM.AU!dave	available

End of Ham-Space Digest V94 #33
